

**REVIEW** 

# The association between ethnicity, socioeconomic status and compliance to pediatric weight-management interventions — A systematic review



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### **KEYWORDS**

Overweight; Dropout; Compliance; Ethnicity; Socioeconomic status

### Summary

*Background:* High dropout rates and low compliance to pediatric weight-management programs have been reported. Socioeconomic status (SES) and ethnicity have been suggested as potentially important determinants of dropout and non-compliance. This review aims to assess the association between SES, ethnicity and study- and intervention dropout and non-compliance among participants in pediatric weight-management programs.

Methods: PubMed, Embase, MEDLINE, Scopus, Cochrane, Web-of-Science and Google Scholar were searched for eligible studies up to March 2014. Included were randomised controlled trials (RCT), controlled clinical trials and cohort studies evaluating pediatric weight-management programs. Studies had to report dropout or non-compliance to the study or intervention with regard to ethnicity or SES. Associations between SES and ethnicity and dropout and non-compliance were analysed descriptively.

Results: Fourteen RCTs and 16 cohort studies were included, studying 7264 children and adolescents, aged 2–20 years. Twenty-four studies presented data on dropout or non-compliance regarding ethnicity and 26 studies presented data regarding SES. Black participants showed higher dropout rates in weight-management interventions (range 65–67%) than White participants (range 22–27%), and low family income was associated with lower compliance to weight-management interventions.

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2 K.A.M. Ligthart et al.

Conclusions: Black ethnicity and low family income seemed to be associated with higher dropout and lower compliance to pediatric weight-management interventions. Future qualitative studies may be needed to assess underlying reasons for increased dropout and non-compliance in these sub-populations.

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### Contents

Introduction	2
Methods	3
Literature search strategy	3
Eligibility	3
Risk of bias assessment	3
Data extraction and management	3
Analyses	4
Results	4
Study selection	4
Study characteristics	4
Risk of bias assessment	5
Dropout, non-compliance and ethnicity	5
Dropout and non-compliance among Black vs. White participants	5
Dropout and non-compliance among Hispanic/Latino vs. White participants	5
Dropout and non-compliance among ethnic minorities vs. White participants	47
Dropout, non-compliance and SES	47
Dropout, non-compliance and SES score	47
Dropout, non-compliance and parental education	47
Dropout, non-compliance and family income	
Dropout, non-compliance and insurance type	
Dropout, non-compliance and parental employment	47
Discussion	
Strengths and limitations	49
Conclusion	49
Appendix A. Supplementary data	49
References	49

## Introduction

Childhood obesity is a major problem throughout the world, particularly in developed countries. In 2013, 23.8% of boys and 22.6% of girls aged 2—19 years were overweight or obese [1]. As obesity appears to track over time, this large number of children is at a significant risk of becoming obese adults [2].

In both adults and children, epidemiological research shows an unevenly distributed prevalence of obesity and overweight between ethnic groups [3–6]. Rates are generally higher in ethnic minorities [6–9]: in the US the highest prevalence is found in Native Americans and African Americans, and in England Black African and Black Caribbean adolescent girls were reported to be more vulnerable to overweight and obesity [6,9]. Not is only the

prevalence of overweight and obesity higher among ethnic minorities, the incidence of overweight is also increasing more rapidly [10,11]. Another factor which is reported to be associated with a higher prevalence of childhood obesity is socioeconomic status (SES) [12]. Children from lower SES households are more likely to become overweight or obese than their peers from a higher SES [12]. Like the ethnic disparities, socioeconomic disparities are also increasing: obesity rates in high SES adolescents appeared to have decreased, while obesity rates in their low-SES peers have increased [13]. At all ages, ethnic minority groups and low-SES groups are all disproportionally affected by overweight or obesity [14].

Since it may reduce the risk on negative health consequences, proper management of child-hood overweight and obesity is important [15,16].

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